

**Work Order ID 52068**

September 16, 2009 7:11:00 AM



Page 1

Item ID: D6102-011

Accept



Setup Start



Revision ID: D

Stop



Item Name: Saddle Billet

Start Date: 9/16/09 Start Qty: 40.00



Cust Item ID:

Required Date: 9/30/09 Req'd Qty: 40.00



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D6102

Rev D

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 10412 (a) Description: Aluminum Billet (b) 6.500" x 8.250" x 2.500" thick. (c) Tolerance on all dimensions is +0.06/0.00. (d) Grain direction along 6.500" length. (e) Material: 6061-T6/T6511 (QQ-A-250/11 or QQ-A-200/8) (Material release certifi

CL 09/09/16 (40)

110

0.00



Receive &amp; Inspect for Damage &amp; Mat'l Certs

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

09/15/22 (46)

120

0.00



QC6- Inspect dimensions to drawing

QC

Memo

0.00

Quality Control

Check certification to Dwg D6102 for compliance

09/16/22

46

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

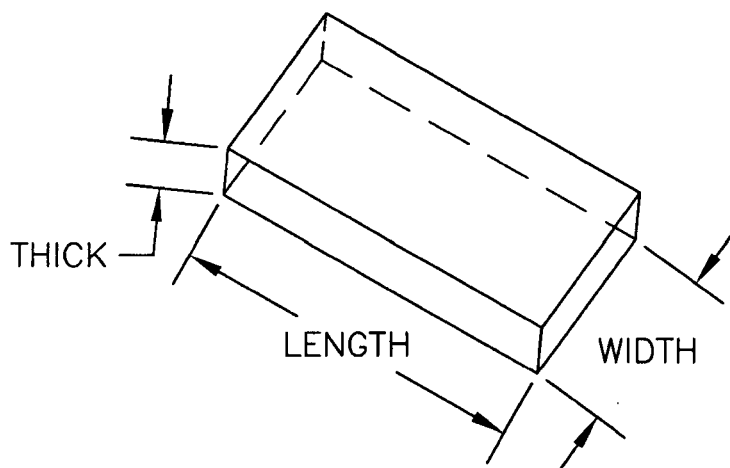
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



DESIGN <i>[Signature]</i>	DRAWN BY <i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CP</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6102	Rev. D SHEET 1 OF 1
DATE 06.06.30		TITLE SADDLE BILLET, 6061	SCALE NTS
A	01.03.30	NEW ISSUE	
B	03.10.20	ADD D6102-005/-007/-009	
C	04.08.25	ADD D6102-010/-011	
D	06.06.30	ADD D6102-013	

## SPECIFICATION CONTROL DRAWING



SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 52068

RELEASED

06.08.15 *[Signature]*

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.06/-0.00), AND GRAIN DIRECTION AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.06/-0.00.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6102-001	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.880	6.250	2.000	Along 7.880 Length
D6102-003	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.000	6.250	2.000	Along 6.000 Length
D6102-005	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	47.85	15.250	1.000	Along 47.85 Length
D6102-007	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.500	7.000	2.500	Along 7.500 Length
D6102-009	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	11.000	6.000	5.000	Along 11.000 Length
D6102-010	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	7.950	8.250	2.500	Along 7.950 Length
D6102-011	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	8.250	2.500	Along 6.500 Length
D6102-013	6061-T6/T651 (QQ-A-250/11 or QQ-A-200/8)	6.500	7.000	2.000	Along 6.500 Length

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SOLD TO:  
DART AEROSPACE LTD  
1270 ABERDEEN STREET

SHIP TO:  
DART AEROSPACE LTD  
1270 ABERDEEN STREET

SPECIAL INSTRUCTIONS

HAWKESBURY , ON  
K6A 1K7  
Contact: LINDA

HAWKESBURY , ON  
K6A 1K7  
Ship Terms: PREPAID

MTR:Y

Currency		Sales Person	Customer Phone	Customer Fax	Customer PO		
CANADIAN DOLLARS		ERYCK BLAIS	(613) 632-5200	(613) 632-1053	P010412		
Sales Order	Terms		Ship Via		Date Ordered	Date Required	Date Shipped
W018552	NET 30 DAYS		NIR:R-557065-1		09/17/09	09/22/09	09/22/09

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
40		PC	ALUMINUM - LB 5061-T6 2 1/2" X 8 1/4" X 7.95" 803 LB / 45 PC	L031389	475042A8	45
40		PC	CUT WITH GRAIN ON LENGHT 7.95" 5061-T6 2 1/2" X 8 1/4" X 6 1/2" 615 LB / 42 PC	L031390	475042A8	45
			61 LB / 4 PC	L031391	475042A8	46
			CUT WITH GRAIN ON LENGHT 6 1/2" SPEC QQ-A-250/11			42 4
Skids: 2				Total	Weight:	1,479 LB

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Signature: \_\_\_\_\_

<b>SHIP TO:</b> ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6
<b>SOLD TO:</b> ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6

**KAISER**  
**ALUMINUM**  
 Trentwood Works - Spokane, WA 99215  
 Phone: (800) 367-2586

72913  
 12914  
 2/8

## CERTIFIED TEST REPORT

Serial Number  
 4167054

<b>CUSTOMER PO NUMBER:</b> 080853-DRB		<b>WORK PACKAGE:</b>	<b>CUSTOMER PART NUMBER:</b>		<b>SHIP RUN/LOAD ID:</b> 101587/6	<b>GOV'T CONTRACT NUMBER:</b>
<b>KAISER ORDER NO:</b> 1084958	<b>LINE ITEM:</b> 14	<b>SHIP DATE:</b> 23-JUL-2009	<b>ALLOY:</b> 6061	<b>CLAD:</b> BARE	<b>TEMPER:</b> T651	<b>PRODUCT DESCRIPTION:</b> KaiserSelect® Precision Plate
<b>WEIGHT SHIPPED:</b> 4324 LB	<b>QUANTITY:</b> 2 PCS EST.	<b>B/L NUMBER:</b> 2023415	<b>GAUGE:</b> 2.5000 IN	<b>DIAMETER/WIDTH:</b> 60.500 IN	<b>LENGTH:</b> 144.500 IN	

### Certified Specifications

AMS 4027/RevN  
 ASTM B 209/Rev07

AMS-QQ-A-250/11/RevA

ASME SB 209/Rev2004

Test Code: 1511

### Test Results

Lot: 475042A8 Cast 732 Drop 33 Ingot 1

(ASTM E8/B557)  
 (EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.0 : 49.4 (338 : 341)	44.2 : 44.6 (305 : 308)	12.9 : 12.9

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.73	0.6	0.31	0.05	1.1	0.20	0.20	0.01	0.01	0.00	TOT 0.04

Lot: 475186A3 Cast 732 Drop 43 Ingot 3

(ASTM E8/B557)  
 (EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T651	LT / 2 (Min:Max)	49.1 : 49.7 (339 : 343)	44.2 : 44.8 (305 : 309)	12.8 : 12.8

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.72	0.6	0.29	0.04	1.0	0.22	0.21	0.01	0.01	0.00	TOT 0.03

# KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4167054

### ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
6061 MIN	0.40	0.0	0.15	0.00	0.8	0.04	0.00	0.00	0.00	0.00	EACH	0.05
MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

Aluminum Remainder

### TEST NOTES

6061 sheet or plate certified to AMS 4025, AMS 4026, or AMS  
4027 also meets applicable requirements of AMS-QQ-A-250/11,  
Rev. A.

### CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(a), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTIRE ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED.

**BILL POYNOR, LABORATORIES SUPERVISOR**



<b>SHIP TO:</b> ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6
<b>SOLD TO:</b> ASA ALLOYS INC 81 STEINWAY BLVD ETOBICOKE, ON, CA M9W 6H6

**KAISER**  
**ALUMINUM**  
 Trentwood Works - Spokane, WA 99215  
 Phone: (800) 367-2586

72913  
 12914  
 218

## CERTIFIED TEST REPORT

Serial Number  
 4167054

<b>CUSTOMER PO NUMBER:</b> 080853-DRB		<b>WORK PACKAGE:</b>		<b>CUSTOMER PART NUMBER:</b>		<b>SHIP RUN/LOAD ID:</b> 101587/6		<b>GOV'T CONTRACT NUMBER:</b>	
<b>KAISER ORDER NO:</b> 1084958	<b>LINE ITEM:</b> 14	<b>SHIP DATE:</b> 23-JUL-2009	<b>ALLOY:</b> 6061	<b>CLAD:</b> BARE	<b>TEMPER:</b> T651	<b>PRODUCT DESCRIPTION:</b> KaiserSelect® Precision Plate			
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 (EN 2002-1)

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Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
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(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
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MAX	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.05	TOT	0.15

### Aluminum Remainder

### TEST NOTES

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Rev. A.

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